Notebook Series -- Notebooks by Edison
Notebook, N-17-10-18

This notebook was used during October 1917 by Edison, his personal assistant William H. Meadowcroft, and an unidentified employee. At the beginning of the book is a one-page note by Meadowcroft entitled "Torpedo Boats," followed by several pages of statistical information copied from the 1916 *Shipping World Year Book* and other published sources. In the middle of the book is an entry by Edison entitled "Notes from Consulting board meeting Sat Oct 20 /17." His remarks pertain to the problems experienced by Allied merchant and naval vessels during World War I and the strategies employed to deal with German submarines. Three pages of additional statistical information follow Edison's notes. The front cover is marked "War." The front flyleaf is inscribed "Miscellaneous Information Oct. 18 – 1917 to." The book contains 5 numbered pages followed by 11 unnumbered pages.

Miscellaneous
Information
Oct. 18-1917
to

73498
Arnold Co.,
MFG. STATIONERS,
96 JOHN ST.
AND

Torpedo Boats

Q. How long does it take for a Torpedo Boat at rest to start and reach full speed?

A. Using 2 boilers 24 Knots can be attained in 5 minutes. In 20 minutes this speed can be held and maintained indefinitely.

Q. Do torpedo boats make much smoke when running full speed?

A. Oil burners – none
Coal burners – almost always – considerable.

How many oil and coal burners in

American Navy – Oil 53
" " Coal – 21
British Navy { Oil 105
" " { Coal 110
" " { 16 no details known
French Navy Oil 24
" " Coal 69

Shipping Data (Shipping World Year Book pages 293-298 1916

Bristol trade 1913 Foreign trade

Port	No. of ships arriving Daily 200 tons & under	# of ships departing daily	Total arrivals + departures	
Belfast	.7	.2	.9	✓
Blyth	2.0	3.0	5.0	✓
Bristol	1.7	1.2	2.9	✓
Burntisland	.7	1.2	1.9	✓
Cardiff	9.8	13.9	23.7	✓
Cork (Queenstown)	1.6	.8	2.4	
Dartmouth	1.3	1.2	2.5	
Dover	3.3	3.3	6.6	
Folkestone	1.1	1.1	2.2	
Glasgow	3.1	5.0	8.1	
Goole	1.0	1.1	2.1	
Grangemouth	1.3	1.3	2.6	
Grimsby	3.2	3.5	6.7	
Hartlepool	1.5	1.1	2.6	
Hull	5.9	5.5	11.4	
Leith	2.0	1.9	3.9	
Liverpool	10.7	10.3	21.0	
London	15.8	12.3	28.1	
Manchester	1.9	1.5	3.4	
Methil	1.2	1.6	2.8	
Middlesbrough	2.5	2.5	5.0	
Newcastle	9.1	11.3	20.4	
Newport	2.9	3.5	6.4	
Plymouth	4.3	3.0	7.3	
Port Talbot	1.1	1.5	2.6	
Southampton	8.3	7.8	16.1	
Sunderland	2.1	2.7	4.8	
Swansea	2.0	3.0	5.0	
Weymouth	1.2	.7	1.9	✓

Shipping Data (Shipping World Year Book 1916) 3
British Trade year 1913

Entered from	No. of Vessels Daily	No. of Vessels Yearly	Net Tonnage	Average net tonnage per ship
Russia				
Northern Ports	11.2	4099	3,594,549	876
Sweden	8.8	3204	2,358,933	735
Norway	9.9	3625	2,176,289	599
Denmark	7.7	2,799	1,860,157	665
Netherlands	27.7	9,359	8,570,797	916
France	42.6	15,527	10,918,454	703
Spain	8.8	3,243	3,405,438	1050
Italy	2.7	976	1,629,136	1670
United States	5.1	1,856	9,083,510	4890
Argentine Republic	2.8	1,007	2,991,591	2970

Shipping losses Steam Vessels.

Cause	# of Vessels lost yearly	Total # Vessels employed	% of loss	Relative to Submarine losses
Submarine	1200	17,037	7.04	100
Wrecks	96	16,013	.60	8.52
Collision	42	16,013	.26	3.69
	Tonnage lost	Tonnage employed		
Submarines	2,640,000		8.65	100
Wrecks	173,635		.69	7.52
Collision	46,012		.17	1.96

Figures of wrecks and collision from 1911 Report of U.S. Commissioner of Navigation

Submarine sinkings. Based on sinkings Feb 1 to Oct 1-1917 Coasts of England and France.

Nationality of ships sunk

British
" Colonial
Danish
Dutch
French
Norwegian
Russian
Swedish

Routes - Hours Knots

hours \ Knots	20	18	16	11	9.5	8.5
3.5	70	63	56	38.5	33.2	29.8
9.0	180	162	144	99.0	85.5	76.5
11.5	230	207	184	126.5	109.2	97.8

Above figures are nautical miles.

Vision	20	12	8	5
Width of path	40	24	16	10

January 1917 - Whitaker Almanack

Twilight	3.5 hours.
Daylight -	9 "
Night	11.5 "

Notes from Consulting board
meeting Sat Oct 20/17

1st Step to Cope with Subm.
Send vessels with high speed
2 Zig Zag
3 Escorting all Capital ships by
Navy + also important Merchant
ships —
Slower ships are helpless + are
torpedoed —

Nobody recognized renewance of
Submarine Menace but soon
found out it was of primary
importance —

Camoflage then Came in by
Smoke screens etc Escorts, Convoys

Submarines out to 20° W
but 17° West is about limit of
practical Operations but this
will be increased Considerably by bringing
out the large Cruising Subs Now held up
for training Crews but will soon appear

greatly increase the Zone

Arming of ships in combination with patrol & escort has kept Submarines below the water. There is very little gun fire from Submarines now, it is too necessary for them to use more Torpedoes

Germans much afraid visiting Merchant ships on which guns Concealed. — Can't see any indication of a gun, but they have Bomb Throwers, guns etc when stopped by a Sub. by signal or otherwise, they all abandon ship & get clear to induce the Sub to come up & bomb her. Then away flies the side of the ship & a good big gun & crew revealed. This gets the Sub & it works.

Some officer stayed by his ship until it was almost sunk but he got the Sub.

There are 6 of these ships in a row at Edinburgh & they are building more. The Germans are very much afraid of them —

On one ship the Sub tried to find out by External & internal inspection if any gun located. Capt clapped his hands & big gun & crew came into action from "No where"

Guns under deck hatch. Elevated by removing hatch. Crew in Water Closets & all manner of places to hide guns & ammunition —

Speaking of a boat suspected she had 2 mortars for bombs & bombs had depth fuses on fire control station between pilot house & other works —

Every little fishing craft, dirty sloppy looking craft are equipped with powerful Mauls + guns all waiting for Subs —

Aircraft control is in as complete operation as the supply of aircraft to Navy would permit —

If an aircraft is patrolling with depth charge torpedoes submarines wont come up for long. The aeroplanes work 60 miles from shore

The tendency is towards larger seaplanes (aeroplanes) They get as low as possible above the Subs —

They use aeroplanes to patrol the channel routes

The thousands of vessels that have been going across the channel they have not lost a man from escorted ships —

They escort the vessels all the way down the coast to the Mediterranean. There another convoy picks them up, The Mediterranean convoy is only recently organized

No matter how successful in defensive must take offensive to succeed

Offensive Methods = Mining. Operations off Heligoland Bight very hard to operate there because sea is rough so rather haphazard. The continued mining operations has resulted in the whole place being filled up by German + allies — so to

Mined 100 miles out of Helgoland
Therefore Cant successfully
lay a mine Barrage
around Helgoland

Subms not Exit from
Zurbruggie & Ostend

The largest go out thru
Danish neutral waters

They have a lot of English
subs up on Danish Coast
to hunt the German Subs,
& they have been ~~fairly~~ quite
successful in laying
submerged in shallow waters
with periscope out looking
for passing German
submarines.

No mine sweepers can get within
30 miles of Helgoland

British fleet cant get into
Baltic except at great risk
so England cant help Russian
Britain has only 7 subs in
Baltic now - Even if fleet
could get in would probably
be bottled up by Germans

English have very fast motor
boats 60 ft long with one
torpedo over stern running in
same direction boat is going
drops torpedo over stern in
same direction boat is going

Have gotten into the mole
of Zurbruggo & damaged the
ships there somewhat,

England shy on large Aeroplanes
Germans have command of the air
on Zeebrugge Coast. Escort
their submarines out of Zurbrugge
by Aeroplanes

Allies are slightly ahead on Battle front but Germans are speeding up

Submarines have to keep on surface for ~~[illegible]~~ at least 20 miles to clear the shoals at Zeebrugge.

Of the 210 accidents to vessels at sea reported in Wireless Year Book of 1917 only ten were due to fog of 5 a/s —

Daily Arrivals and departures British Ports, 1913
Steam vessels.
Cargo and Ballast. (to nearest whole No.)

Ports	Canada	U. S.	Central America	South America	North European Ports	Netherlands Belgium	Spain Africa Mediterranean & Adriatic	France	Total
Belfast					1	1			2
Cork		1							1
Glasgow	1	1		1	1	1	4	1	10
Liverpool	1	3	2	2	3	2	7	2	22
Manchester, Bristol, Newport, Cardiff, Port Talbot, Swansea	1	1	1	4	3	7	18	22	57
Portsmouth, Plymouth		1			1	1	2	1	6
Weymouth					1		2		3
Southampton		1		1		1	1	7	11
Dover, Folkestone						9		17	26
New Haven								7	7
London	1	2	1	1	6	17	7	4	39
Harwich					2	6			8
Lowestoft						1			1
Hull, Grimsby				1	22	15	3	6	47
Sorle									
Middlesbrough					2	2	2	1	7
Hartlepool					2	1	1	1	5
Sunderland					3	1	1	2	7
Newcastle		1			8	7	6	6	28
Blyth					6	1	1	1	9
Leith, Grangemouth, Burntisland, Methil					11	6	1	2	20
Bowmstone					2				2
Total	4	11	4	10	74	79	56	80	318

Great Britain - 318
Germany 24
Norway Sweden Holland 12

12 9,000 Voyages per year

Daily Arrivals and Departures French Ports 1913

Steam Vessels

Cargo and Ballast (to nearest whole No.)

Ports	Canada	N.S.	Central America	South America	North Europe Ports	Netherlands Belgium	Steam Mediterranean Ports	Great Britain	Totals
Dunkerque					1	1	1	4	7
Calais					1			11	12
Boulogne		1		1				11	13
Dieppe								2	2
Havre, Honfleur, Rouen, Caen		1	1	1	2	2	2	22	31
Cherbourg		1						4	5
St. Malo								4	4
Brest								1	1
St Nazaire Nantes							2	4	6
Bordeaux						1	3	4	8
Dieppe								9	9
La Rochelle							1	1	2
Bayonne							1	1	2
Totals		3	1	2	4	4	10	78	102